



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------|-------------|----------------------|---------------------|------------------|
| 10/723,104 | 11/26/2003 | Ketan Padalia | ALTRP196/A1103 | 1304 |
| 51501 | 7590 | 10/19/2007 | EXAMINER | |
| BEYER WEAVER LLP | | | NGO, CHUONG D | |
| ATTN: ALTERA | | | ART UNIT | PAPER NUMBER |
| P.O. BOX 70250 | | | 2193 | |
| OAKLAND, CA 94612-0250 | | | | |

| | |
|------------|---------------|
| MAIL DATE | DELIVERY MODE |
| 10/19/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/723,104 | PADALIA ET AL. | |
| | Examiner | Art Unit | |
| | Chuong D. Ngo | 2193 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 November 2003.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, "the K-LUT logic cell", lines 6-7, lacks a proper antecedent basis. Claim 15 also have the same problem.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3,9 and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nakaya (6,188,240).

As per claims 1-3, Nakaya discloses A programmable logic device (PLD) including a plurality of logic array blocks (LAB's) connected by a PLD routing architecture (see figure 34), wherein at least one LAB includes a logic element (LE) configurable to arithmetically combine a plurality of binary input signals in a plurality of stages (figure 17), the LE comprising look-up table (LUT) logic having K inputs (a "K-LUT") including a plurality of portions (2), each portion connected to a routing architecture (8) via an input line network (3) and having circuitry for generating binary result signals(C,S) indicative separate one a plurality of stages of the

arithmetic combination of binary input signals, and providing the binary result signal to an output line network as claimed.

As per claims 9 and 10, the input line network as disclosed in figure 44 clearly has a plurality of multiplexer (32) configurable to perform a selection function as claimed.

4. Claims 1,14 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by New (6,154,053).

New discloses a programmable logic device (PLD) including a plurality of logic array blocks (LAB's) connected by a PLD routing architecture (see figures 14-17), wherein at least one LAB includes a logic element (LE) having look-up table (LUT) logic configurable to arithmetically combine a plurality of binary input signals in a plurality of stages (figures 6-12), and at least one output multiplexer (170 in figure 7 and 131'-134' in figure 11) coupled to select among signals at the output under the control of a carry in (Cin) signal to the logic element as claimed.

5. Applicant's arguments filed on 08/03/2007 have been fully considered but they are not persuasive.

Regarding Nakaya, the circuit in figure 17 clearly shows the claimed LAB having a logic element configurable to arithmetically combine a plurality of binary input signals in a plurality of stages, and having at least three portions (2) that together provide binary results signals of at least two stages as claimed.

Similarly, in New the CBL in figure 14 clearly show the claimed LAB includes a logic element (LE) configurable to arithmetically combine a plurality of binary input signals in a plurality of stages to provide binary results signals (Si and Si+1) of at least two stages as claimed.

6. Claims 4-8 and 11-13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Chuong D Ngo
Primary Examiner
Art Unit 2193

10/16/2007